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## **CHAPTER 8**

CHANGES IN THE
SMOKING-AND-HEALTH ENVIRONMENT:
BEHAVIORAL AND
HEALTH CONSEQUENCES

# **CONTENTS**

Introduction	649
The Antismoking Campaign	649
Behavioral Effects of the Campaign	650
Smoking Prevalence	
Per Capita Cigarette Consumption	
Effects in Years of Major Smoking-and-Health Events	658
Aggregate Effects	662
Filter-Tipped and Low-Tar and -Nicotine Cigarettes	664
Health Consequences of the Campaign	665
Mortality Postponed by Campaign-Related Decreases in	
Smoking Prevalence	666
Conclusions	669
Appendix	671
References	681

#### Introduction

As the preceding chapters have documented, concern about the hazards of smoking during the past 25 years has been associated with development and dissemination of scientific knowledge and with a wide variety of private and public sector activities intended to reduce the disease burden of smoking. Collectively, these efforts have been labeled "the antismoking campaign" (Warner 1977, 1989). This Chapter reports on research concerning the effects of the campaign and accompanying knowledge and attitudinal changes on cigarette consumption and its mortality toll. Whereas previous chapters have examined trends in smoking behavior and its health consequences, the research reviewed in this Chapter analyzes how these trends compare with those that would have been expected in the absence of changes in the smoking-and-health environment.

Prior to reviewing the evidence, the next section presents a brief discussion of what the term "antismoking campaign" is intended to connote throughout the Chapter.

#### The Antismoking Campaign

Activities directed at discouraging the use of tobacco products were reviewed in Chapters 6 and 7. While some of these activities have been developed explicitly as campaigns against smoking, such as efforts of the major voluntary societies, there has been no single, longstanding, organized, national campaign to reduce smoking and its associated disease burden. The widespread perception of the existence of a national "campaign" reflects the large number of antismoking activities, their shared goals of smoking prevention and cessation, and their persistence throughout the past 25 years. Smoking cessation and prevention activities predated the first Surgeon General's Report, but 1964 marked the beginning of the first period of sustained, substantial, and expanding antismoking activity. Hence "the antismoking campaign" is typically dated from publication of the first Report. Important developments related to smoking and health from 1964 through 1988 are presented in the Appendix to this Chapter.

Throughout this Chapter, the term "antismoking campaign" is used in a broader context as a convenient designation for the collectivity of these activities and for the changing social norms that have accompanied them (see Chapter 4). In essence, it serves as a shorthand expression covering smoking-and-health knowledge, concern, and reaction, the entirety of changes in the social environment spawned by scientific and social interest in the hazards of smoking. This includes the conduct of the tobacco industry in response to concerns about those hazards. Thus, for example, manufacturers' promotion of low-tar and -nicotine cigarettes in the 1970s is both a response to public concerns about smoking and a contributor to smoking behavior and its health consequences. Research on the behavioral and health implications of the campaign therefore examines the net effects of "pro" and "anti"-smoking information and activities.

Scholars have addressed the effects of both specific seminal events of the antismoking campaign and the consequences of the campaign in its entirety. Among the seminal events analyzed by researchers are publication and media coverage of the first Surgeon General's Report, the Fairness Doctrine broadcast media antismoking public

service announcements of 1967–70, the ensuing ban on broadcast advertising of cigarettes, and the spread of nonsmokers' rights legislation in the 1970s and 1980s, all discussed in the preceding chapter. The pattern of one significant influence on cigarette consumption—excise taxation—has also been considered part of the antismoking campaign: a steady pattern of increases in State taxes in the 8 years following release of the first Surgeon General's Report might be construed as a campaign response, at least in part (Warner 1981b). Analysis of the role of excise taxation in the antismoking campaign, reviewed below, has treated taxation as both a component of the campaign and an independent phenomenon (Warner 1977, 1981a, 1989).

Research reviewed in this Chapter focuses on campaign effects since 1964, with one important exception: the shift from unfiltered to filtered cigarettes in the 1950s following the first widespread public concern about a link between smoking and lung cancer, and cigarette manufacturers' development and marketing of new filter-tipped products.

#### Behavioral Effects of the Campaign

In terms of health implications, the most significant behavior changes associated with the antismoking campaign likely relate to the most basic measures of smoking: prevalence and per capita cigarette consumption. Following examination of the evidence pertaining to impact of the campaign on these variables, this Section briefly reviews two other behavioral measures relating to smokers' choice of cigarette type: shifts toward filtered cigarettes and low-tar and -nicotine brands.

### **Smoking Prevalence**

The most common index of changes in smoking behavior is smoking prevalence. Trends in prevalence by a variety of socioeconomic and demographic characteristics were reviewed in Chapter 5. Analytical studies relating prevalence trends to antismoking activities are relatively few in number, although the literature on cigarette excise taxation and the broadcast media advertising ban includes studies that have relied on survey-based prevalence data; these were reviewed in Chapter 7 (e.g., Lewit, Coate, Grossman 1981; Lewit and Coate 1982).

Evidence pertaining to the effects of the antismoking campaign on smoking in various age—sex cohorts was examined in a previous Surgeon General's Report (US DHEW 1979). Since publication of that Report, two studies have analyzed the cohort prevalence effects of the antismoking campaign in its entirety (Warner and Murt 1982; Warner 1989). Findings from these studies are reviewed in this Section. Discussions of the strengths and limitations of cohort analyses have been presented previously by the Surgeon General (US DHHS 1980) and by other scientists (Harris 1983; Brown and Kessler 1988).

Among changes in the prevalence of smoking since 1964, some logically suggest significant response to the smoking-and-health message. The decreasing prevalence of smoking among both men and boys serves as the most obvious example. Other patterns often have been interpreted as reflecting little response to the message. The most notable example is the relatively steady trend in adult female smoking prevalence from